

Remarks

The present Amendment is submitted in response to the non-final Office Action mailed on March 16, 2010.

The non-final Office Action maintains the restriction of claims 23-25 under 37 CFR 1.142(b); MPEP §821.03, rejects claims 1-5, 9, 11-20 and 22 under 35 USC §112, first paragraph as failing to comply with the written description requirement, rejects claims 1-5 and 11-19 under 35 USC §112, second paragraph, as indefinite, rejects claims 1-3, 9 and 11-20 as anticipated by Izumisawa and rejects claims 4, 5 and 22 under 35 USC §103(a) as obvious over Izumisawa.

Elections/Restrictions

Applicants hereby cancel claims 23-25 without prejudice or disclaimer of subject matter in response to the restriction under 37 CFR 1.142(b); MPEP §821.03.

35 USC §112

Applicants hereby submit new drawing Fig. 1A, amend the Specification as depicted above and amend independent claims 1 and 9 in response to the rejection of claims 1-5, 9, 11-20 and 22 under 35 USC §112, first paragraph, and the rejection of claims 1-3, 9 and 11-20 under 35 USC §112, second paragraph.

Support for the amendments is found in Figs. 1 to 3 as originally filed, in newly presented Fig. 1A and at least at page 5, lines 7 to 12 of the Specification.

Applicants respectfully assert that the drawings figures and written description now support and make clear that suction conduit (18) extends in the longitudinal direction of the driven shaft (16) past a bearing flange (32) of the driven shaft (16) to an outside of the housing (10), that suction conduit (18) operates as an intake, shaped as an annular gap on the face end of the housing (10) between the bearing flange (32) of the driven shaft (16) and the housing (10) in a plane perpendicular to the longitudinal direction of the driven shaft (16), that the annular gap is formed by a radial distance R_g between an outer edge of the bearing flange (32) facing the housing (10) in the plane perpendicular to the longitudinal direction of the driven shaft (16) and an inner edge of the housing (10) facing the driven shaft (16) and extending perpendicular to the face end (14) of the housing (10), that the radial distance R_g is measured in the plane perpendicular to the longitudinal direction of the driven shaft (16), that the annular gap includes a radial extent that is defined by the radial distance R_g , that the driven shaft (16) is defined by radius R_s extending from an axial center of the driven shaft (16) to an outer edge of the driven shaft (16) and that the radial extent of the annular gap is smaller than a diameter of the driven shaft (10) that is equal to two times the radius R_s .

Put another way, the limitation of claims 1 and 9 requiring that the radial extent of the annular gap R_g is than the diameter of the driven shaft (which shaft diameter is twice the radius R_s), is clearly support by the instant application.

Accordingly, applicants respectfully request withdrawal of the rejection of claims 1-5, 9, 11-20 and 22 under 35 USC §112, first paragraph, and the rejection of claims 1-3, 9 and 11-20 under 35 USC §112, second paragraph.

35 USC §102

In response to the rejection of claims 1-3, 9 and 11-20 under 35 USC §102(b) over Izumisawa, applicants respectfully assert that independent claims 1 and 9 (as shown and discussed above), and therefore claims 2, 3 and 11-20, are patentable over Izumisawa under §102(b).

Izumisawa discloses a sander which comprises an upper housing (10), a lower housing (35) and a motor arrangement that is located in the upper housing (10), and by which a driven shaft (25), extending from a face end of the lower housing (35), is drivable. Furthermore, the sander includes a suction conduit (41, 42) through which abraded material and fine dust can be aspirated. The suction conduit (41, 42) extends from an open area at an underside of the lower housing (35) which operates as an intake, through a chamber (41) in the lower housing (35), to an exhaust duct (42) and out of the lower housing (35) through a hose (43) [Izumisawa, col. 4, line 61 to col. 5, line 4; Fig. 1].

Izumisawa teaches to construct the intake of the suction conduit 41, 42 as an annular gap in a plane perpendicular to a longitudinal direction of the driven shaft 25, between the driven shaft 25 and the housing 35, which largely overlaps an abrading pad 28. The annular gap is formed by a radial distance between an outer edge of a bearing flange facing the housing 35 in the plane perpendicular to the longitudinal direction of the driven shaft 25 and an inner edge of the housing 35 facing the bearing flange.

The radial distance is measured in the plane perpendicular to the longitudinal direction of the driven shaft 16. The annular gap includes a radial extent that is defined by the radial distance. Moreover, the driven shaft 25 is defined by a radius extending from an axial center of the driven shaft 25 to an outer edge of the driven shaft 25. The radial extent of the annular gap is greater than a diameter of the driven shaft 25, which diameter is equal to two times of the radius of the driven shaft 25.

Therefore, Izumisawa lacks the feature that the radial extent of the annular gap is smaller than a diameter of the driven shaft 25.

In contrast, the present invention as claimed defines an intake of a suction conduit (18) as an annular gap between a bearing flange (32) of a driven shaft (16) and a housing (10) in a plane perpendicular to a longitudinal direction of the driven shaft (16). The annular gap is formed by a radial distance R_g between an outer edge of the bearing flange (32) facing the housing (10) in the plane perpendicular to the longitudinal direction of the driven shaft (16) and an inner

edge of the housing (10) facing the bearing flange (32) and extending perpendicular to the face end (14) of the housing (10).

The radial distance R_g is measured in the plane perpendicular to the longitudinal direction of the driven shaft (16). Furthermore, the annular gap includes a radial extent that is defined by the radial distance R_g and the driven shaft (16) is defined by a radius R_s extending from an axial center of the driven shaft (16) to an outer edge of the driven shaft (16). The radial extent of the annular gap is smaller than a diameter of the driven shaft (16), which diameter is equal to two times of the radius R_s .

As such, a dimension of the intake can be achieved by which a low suction power is needed to aspirate particles and dust, whereby electrical energy can be economized and costs saved. That is, the invention as claimed provides a fluidic optimized suction conduit.

Izumisawa, as distinguished, neither provides such features, or apparatus as a whole, nor can be said to motivate a person skilled in the art at the time the invention was made, to choose such a radial extent of its intake that is smaller than a diameter of the driven shaft, still less to achieve a fluidic optimized suction conduit. Hence, claims 1 and 9, and claims 2, 3 and 11-19 that depend from claim 1, and claim 20 that depends from claim 9, are patentable in view of Izumisawa under §102(b).

Nor does Izumisawa teach or suggest the invention of amended independent claim 9, including that the first suction conduit (18) and the second

suction conduit (20) are coupled via a region (26) that is open in a radial direction towards the outside of the hand-held power tool and the tool receptacle and extends between the face end (14) of the housing (10) and a top side (52) of the tool receptacle, wherein the top side (52) of the tool receptacle is oriented in an installed state of the tool receptacle towards the face end of the housing (10).

Izumisawa discloses that region 47 is open in a downward direction, forming a point angle with the longitudinal direction of the driven shaft. Izumisawa's region 47 is not oriented in the radial direction and is not located between an open area at the underside of the lower housing 35 and a top side of the tool receptacle. Hence, Izumisawa's openings 47 are only able to capture particles close to a surface being operated upon and not particles in the region of the entire circumference, which are more likely to be dispersed around the hand-held power tool and inconvenience the operator, impeding performance.

Applicants' invention as claimed is configured to overcome just this type of shortcoming. That is, the radial orientation of amended independent claim 9 has the advantage that dust particles which are not captured directly via openings 50 (See Fig. 2) are dispersed around the power tool along its circumference, and readily captured before they reach a face of an operator of the tool.

In view of the fact that amended claims 1 and 9 recite these limitations, which Izumisawa does not, Izumisawa does not anticipate claims 1 and 9. Applicants further respectfully assert that Izumisawa is not a proper reference

under 35 USC §102 pursuant to the guidelines set forth in the last paragraph of MPEP §2131.

Independent claims 1 and 9 are therefore patentable under 35 USC §102(b) over Izumisawa. Claims 2, 3 and 11-19, which depend from claim 1, and claim 20 which depends from claim 9 are patentable under section 102(b) over Izumisawa for at least the same reasons.

35 USC §103

In response to the rejection of claims 4, 5 and 22 under 35 USC §103(a) over Izumisawa, applicants respectfully assert that because claims 4 and 5 depend from amended claim 1, and claim 22 depends from amended claim 9, these claims are patentable under section 103(a) over Izumisawa for at least the reasons set forth for the patentability of amended claims 1 and 9.

Applicants, therefore, respectfully request withdrawal of the rejection of claims 4, 5 and 22 over Izumisawa under section 103(a).

Accordingly, the application as amended is believed to be in condition for allowance. Action to this end is courteously solicited. However, should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application in condition for allowance.

Respectfully submitted,



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